Chapter – 3
COST ESTIMATES

3. COST ESTIMATES

➢ **Detailed Cost Estimate**

Detailed cost Estimate has been worked out based on detailed engineering design.

➢ **General**

Cost Estimate is an important part of the Report as it provides vital input to financial evaluation of the project.

➢ **Basic rates**

As part of Report, Rate Analysis of each of the item has been prepared by adopting PW, P & IWTD SR 2018 – 19, Bangalore Circle. The rates as given in PW, P & IWTD SR are to be enhanced by 6% and 8% for additional weightages for the works to be executed under extra ordinary conditions for Bangalore Metropolitan Limits. Items not covered in NHSR / PW, P & IWTD SR have been based on market rates.

➢ **DPR Preparation, Project Management and Quality Control**

Provision of 1 % of Construction Cost has been made towards DPR Preparation and 1% for PMC Charges and third party inspection.

➢ **Project Cost**

The total project cost for the proposed work is 100.00Lakh.

Detailed Cost Estimate is enclosed in **Annexure: Detailed Cost Estimate**

Improvments Road From NH-7 to Sanjeevininagar up to Hebbal Sarovara Layout in Ward No 07 and Ward No 08 in Kodigehalli Sub division.

25

BRUHAT BANGALORE MAHANAGARA PALIKE

Project Name: Improvments Road From NH-7 to Sanjeevininagar up to Hebbal Sarovara Layout in Ward No 07 and Ward No 08 in Kodigehalli Sub division.

								Est Cost:	100.00 Lakhs
Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2018-19)								
	Basic Rate	105.00							
	6% Area Weightage	6.30							
	Total	111.30							
	New RCC Drain	Sqm							
	Shanthivana 2nd Cross Road		2	416.00	0.90		748.80		
	Sanjeevininagar								
	8th Cross Road		2	185.00	0.90		333.00		
	10th Cross Road		2	100.00	0.90		180.00		
	Cross Road		2	40.00	0.90		72.00		
	Consider 20% and Missing Slabs						-133.38		
							1,200.42	111.30	133,607.00
2	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2018-19)								
	Basic Rate	130.00							
	6% Area Weightage	7.80							
	Total	137.80							
		Cum							
	New RCC Drain								
	Shanthivana 2nd Cross Road		2	416.00	1.10	0.90	823.68		
			2	97.50	1.10	0.90	193.05		
	New RCC Culvert		1	10.00	1.40	0.90	12.60		
	Sanjeevininagar								
	Desilt								
	8th Cross Road		1	185.00	0.45	0.50	41.63		
	10th Cross Road		1	100.00	0.45	0.50	22.50		
							1,093.46	137.80	150,678.00
3	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration inlcuding curing for 14 days including cost of all materials labour, HOM curing, form works, scaffolding and centering complete as per specification . (Pg.No.222, It.27.18)								
	Basic Rate	5,115.00							

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	3.6 x 103.69	373.28							
	Sub Total	5,488.28							
	6% Area Weightage	329.30							
	Total	5,817.58							
		Cum							
	New RCC Drain								
	Shanthivana 2nd Cross Road		2	416.00	1.10	0.15	137.28		
			2	97.50	1.10	0.15	32.18		
	New RCC Culvert		1	10.00	1.40	0.15	2.10		
	Road Work								
	Sanjeevininagar								
	8th Cross Road		1	185.00	4.00	0.15	111.00		
	10th Cross Road		1	100.00	4.00	0.15	60.00		
	Cross Road		1	40.00	4.50	0.15	27.00		
	Road Cut								
	Cross Road		1	55.00	1.80	0.15	14.85		
	Cross Road		1	35.00	1.00	0.15	5.25		
							389.66	5817.58	2,266,850.00
4	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specificationsdo-Wall and Bottom Thickness 15cm (I No-37.59.1,P No-271)								
	Basic Rate	6,670.00							
	6 x 103.69	622.14							
	Sub Total	7,292.14							
	6% Area Weightage	437.53							
	Total	7,729.67							
	New RCC Drain	Cum							
	Shanthivana 2nd Cross Road								
	Raft		2	416.00	0.90	0.15	112.32		
			2	97.50	0.90	0.15	26.33		
	Side Wall		4	416.00	0.15	0.60	149.76		
			4	97.50	0.15	0.60	35.10		
	New RCC Culvert								
	Raft		1	10.00	1.20	0.20	2.40		
	Side Wall		2	10.00	0.20	0.60	2.40		
							328.31	7729.67	2,537,689.00
5	KSRRB M2200-6. Providing TMT Bars Fe 500 steel reinforcement for R.C.C. work including straightening, cutting, bending, hooking, placing in postion, lapping and/or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specification.(I.NO 28.8.2 Page no 229, SR 2018-19)								
	Basic Rate / Issue Rate	85,468.00							
	6% Area Weightage	5,128.08							

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	Total	90,596.08							
	Consider 60kg /cum for RCC Drain Quantity	Tonne		323.51	0.060	--	19.41		
	Consider 80kg /cum for Culvert	Tonne		4.80	0.080	--	0.38		
							19.79	90596.08	1,793,286.00
6	Providing and fixing RCC Precast cover slab of 100mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Data Rate	2,237.00							
	New RCC Drain	Sqm							
			2	97.50	0.90		175.50		
							175.50	2237.00	392,594.00
7	Providing and fixing RCC Precast cover slab of 250mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Data Rate	5,418.00							
	New RCC Culvert	Sqm	1	10.00		1.20	12.00		
							12.00	5418.00	65,016.00
8	KSRRB M200-24. Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials stacking serviceable and unserviceable materials seperately complete as per specifications. MORTH Specification No. 202 (P.No.140, I.No.18.47 of PW,P&IWTD SR 2018-19)								
	Basic rate	899.00							
	Loading and unloading with 8 lead (as per SR-2018-19)= 57+2.0x1.30x20 = 109	109.00							
	Sub Total	1,008.00							
	6% AW	60.48							
	Total	1,068.48							
		Cum							
	10th Cross Road		1	100.00	4.00	0.15	60.00		
	Cross Road		1	40.00	4.50	0.15	27.00		
							87.00	1068.48	92,958.00
9	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 10km lead= (I No-19.14,P No-143)								
	Basic rate	41.00							
	Loading and unloading with 8 lead (as per SR-2018-19)= 57+2.0x1.28x20 = 108.2	108.20							

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
	Sub Total	149.20							
	6% AW	8.95							
	Total	158.15							
		Cum							
	8th Cross Road		1	185.00	4.00	0.20	148.00		
	10th Cross Road		1	100.00	4.00	0.20	80.00		
	Cross Road		1	40.00	4.50	0.20	36.00		
	Road Cut								
	Cross Road		1	55.00	1.80	0.20	19.80		
	Cross Road		1	35.00	1.00	0.20	7.00		
							290.80	158.15	45,991.00
10	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 with OPC at 360 kg/cum and coarse aggregate 0.69cum, fine aggregate 0.46cum. over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries,all lead & lift charges etc., complete as per specifications. (P.No-182,I No-22.6.1)								
	Basic rate	4916.00							
	7.2*103.69	746.57							
	Sub Total	5662.57							
	6% AW	339.75							
	Sub Total	6002.32							
		Cum							
	8th Cross Road		1	185.00	4.00	0.15	111.00		
	10th Cross Road		1	100.00	4.00	0.15	60.00		
	Cross Road		1	40.00	4.50	0.15	27.00		
	Road Cut								
	Cross Road		1	55.00	1.80	0.10	9.90		
	Cross Road		1	35.00	1.00	0.10	3.50		
							211.40	6,002.32	1,268,891.00

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
							Total Construction Cost		8,747,560.00
							12% GST to Construction Cost		1,049,707.20
							Cost towards Preparation of DPR 1%		100,000.00
							Cost towards PMC / Third Party inspection 1%		100,000.00
								Sub Total	9,997,267.20
							Miscellaneous and rounding off		2,732.80
								TOTAL	10,000,000.00

Certificate.

1 The workspot was inspected and work is found to be necessary.

2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

3 The rates adopted based on the PWD SR, Bangalore circle for year 2018-19.

4 The provisions made in the estimate are necessary and essential.

For Tejus Consultants

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Byatarayanapura Division
B.B.M.P

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Byatarayanapura Division
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